Montana Department of
ENVIRONMENTAL QUALITY

Judy Martz, Governor

P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • www.deq.state.mt.us

Asbestos Basics

The Asbestos Control Program is housed within the Permitting & Compliance Division of the Department of Environmental Quality. The Asbestos Control Program oversees the permitting of asbestos abatement projects, the accreditation of asbestos-related occupations, the approval and auditing of asbestos training course providers, and provides compliance assistance to the regulated community and interested parties. The Department is also delegated by EPA to administer the asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61 Subpart M National Emission Standard for Asbestos). The asbestos NESHAP governs a host of asbestos emission sources including building renovation and demolition activities and asbestos landfills.

This article discusses the basics of asbestos. The second article in this series discusses asbestos regulations that relate to public and commercial building owners and contractors. A third article discusses asbestos in the home.

What Is Asbestos?

Asbestos is a name given to a group of naturally occurring minerals including its regulated fibrous forms: chrysotile, amosite, crocidolite, anthophyllite, actinolite, and tremolite. The word asbestos is derived from the Greek language meaning inextinguishable.

How Is Asbestos Used and Where Would You Find It?

Asbestos had been used in a variety of materials and applications for purposes of reinforcement, heat and cold insulation, condensation control, friction, fire protection, sound dampening, decoration, texturing, chemical resistance, and other applications. Asbestos was used in over 3500 types of materials. Some materials, such as vermiculite might be contaminated with asbestos naturally. Materials which contain more than 1% asbestos are called asbestos-containing materials (ACM). Typically, asbestos is found in thermal system insulation such as pipe and boiler insulation, surfacing material such as fireproofing and wallboard, and miscellaneous materials such as floor and ceiling tiles. In America, asbestos was used in a variety of materials from the late 1800s to the present; however, its use has declined. Contrary to popular belief, asbestos is not banned from certain products in America. Certain materials such as floor tile, linoleum, adhesives, roofing products, clutch and brake assemblies, etc, might contain asbestos. Prior to purchasing products or materials determine whether asbestos is present. Asbestos-containing materials are currently being used widely in developing and industrializing countries.

You may have run across the terms friable and non-friable asbestos-containing materials. EPA's NESHAP regulation defines friability as the ability of a dry asbestos-containing material to be crumbled, pulverized, or reduced to powder by hand pressure. Examples of friable asbestos include thermal system insulation and spray-on fireproofing. Asbestos-containing materials such as floor tile, roofing, asbestos cement products, and gaskets are typically non-friable. Be aware that demolition and renovation activities can render nonfriable ACM friable, and thus, more regulated. Contact the Asbestos Control Program for more information.

Why Is Asbestos A Concern?

Asbestos is a health concern because it is a carcinogen, meaning it causes cancer. Asbestos can break down into very small fibers that can become airborne and stay airborne for a long time. Exposure generally occurs by inhalation or ingestion. Asbestos causes asbestos-related illnesses such as asbestosis, mesothelioma, and other cancers. Asbestosis is an illness characterized by the scarring of the lungs that reduces the lungs' ability to function. Mesothelioma is a cancer of the membrane lining the chest or abdominal cavity specifically related to asbestos. Lung cancer and other cancers have been linked to asbestos exposure. Epidemiological studies (studies of people and diseases) document asbestos-related illnesses caused by exposure to asbestos in many occupations including mining, milling, manufacturing, insulating, shipbuilding, construction, and others.

Cases of asbestos-related illnesses have also been documented in persons exposed to asbestos indirectly in non-occupational settings. Wives, husbands, and children of people who worked with asbestos have contracted asbestos-related illnesses after being exposed to asbestos dust brought home on the clothes of those people.

Generally, a latency period of 10 to 30 years accompanies asbestos exposure before an asbestos-related illness develops. This latency period is dependent on other factors in a person's life, including whether the affected person smokes or smoked. According to research statistics, a smoker who is exposed to asbestos is over 50-90 times more likely to develop an asbestos-related illness than a non-smoker. The reason why smokers are so susceptible to asbestos is due to the loss of the lungs' capability to rid itself of fibers.

If you have any questions concerning asbestos, feel free to contact the Asbestos Control Program at (406) 444-5300 or visit us at www.deq.state.mt.us/pcd/